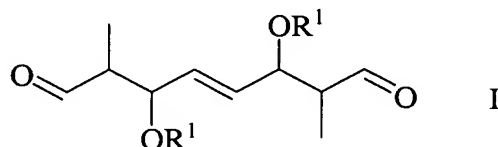


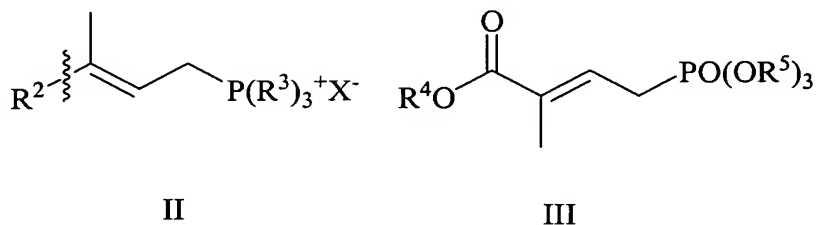
## IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A process for preparing carotenoids, which comprises reacting a dialkoxy dialdehyde of the general formula I

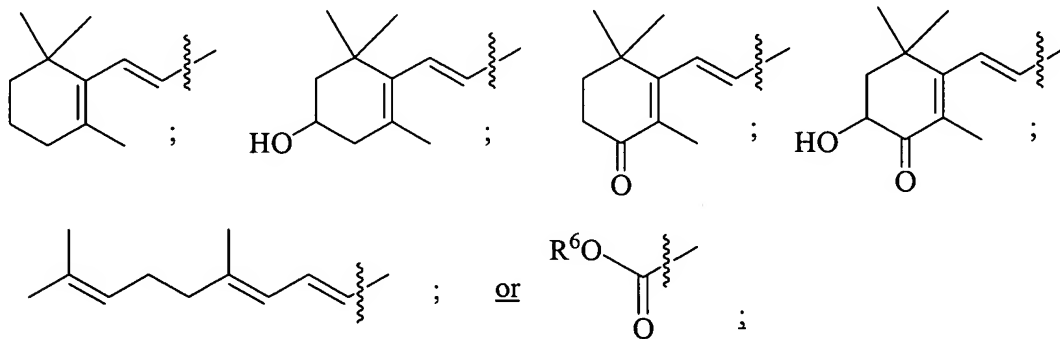


wherein  $R^1$  is  $C_1$ - $C_6$ -alkyl with  $R^1 = C_1$ - $C_6$ -alkyl, in a double Wittig condensation with a phosphonium salt of the formula II or in a double Wittig-Horner condensation with a phosphonate of the formula III



~~in which the substituents have independently of one another the following meaning~~  
wherein the substituents in formulas II and III, independently of one another, are defined as follows:

$R^2$  is



$R^3$  is aryl;

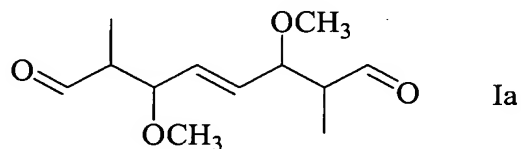
$R^4$  to  $R^6$  are  $C_1$ - $C_6$ -alkyl; and

$X^-$  is an anion equivalent of an inorganic or organic acid.

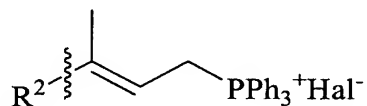
Claim 2 (Original): The process according to claim 1, wherein  $X^-$  is the anion equivalent of an acid selected from the group consisting of hydrohalic acid, sulfuric acid, phosphoric acid, formic acid, acetic acid and sulfonic acid.

Claim 3 (Original): The process according to claim 2, wherein  $X^-$  is  $Cl^-$ ,  $Br^-$ ,  $C_nH_{2n+1}-SO_3^-$  with  $n = 1-4$ ,  $Ph-SO_3^-$ ,  $p-Tol-SO_3^-$  or  $CF_3-SO_3^-$ .

Claim 4 (Currently Amended): The process according to ~~any of claims 1 to 3~~ claim 1 for preparing a carotenoid selected from the group consisting of astaxanthin, lycopene and canthaxanthin, which comprises reacting a dialkoxy dialdehyde of the formula Ia

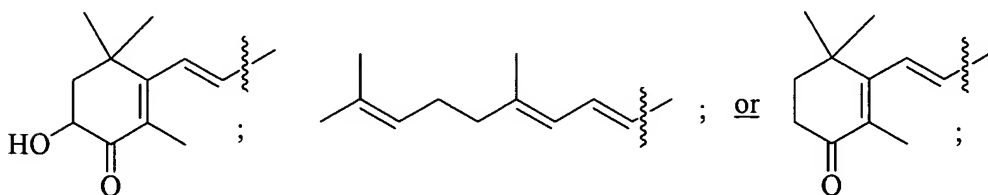


with a phosphonium salt of the formula IIa,



in which the substituents have independently of one another the following meaning:

$R^2$  is



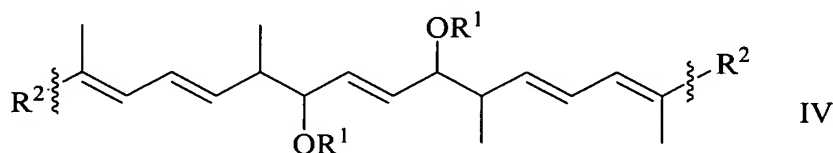
Ph is phenyl; and

Hal is halide.

Claim 5 (Currently Amended): The process according to ~~any of claims 1 to 4~~ claim 1, wherein the reaction is carried out in a C<sub>1</sub>-C<sub>6</sub> alcohol using an alkali metal or alkaline earth metal alkoxide as base.

Claim 6 (Currently Amended): The process according to ~~any of claims 1 to 5~~ claim 1, wherein the reaction product is thermally isomerized into the all(E) form and isolated by filtration.

Claim 7 (Currently Amended): Compounds of the formula IV,



wherein in which the substituents R<sup>1</sup> and R<sup>2</sup> have independently are independent of one another ~~the meaning stated~~ and defined in claim 1.